

**Redacted Version of  
Document Sought to be Sealed**

**Declaration of Christopher Thompson  
in Support of Plaintiffs' Supplemental  
Sanctions Motion Pursuant to Dkt. 624**

**BOIES SCHILLER FLEXNER LLP**

David Boies (admitted *pro hac vice*)  
333 Main Street  
Armonk, NY 10504  
Tel: (914) 749-8200  
dboies@bsfllp.com

Mark C. Mao, CA Bar No. 236165  
Beko Reblitz-Richardson, CA Bar No. 238027  
Erika Nyborg-Burch, CA Bar No. 342125  
44 Montgomery St., 41st Floor  
San Francisco, CA 94104  
Tel.: (415) 293-6800  
mmao@bsfllp.com  
brichardson@bsfllp.com  
enyborg-burch@bsfllp.com

James Lee (admitted *pro hac vice*)  
Rossana Baeza (admitted *pro hac vice*)  
100 SE 2nd St., 28th Floor  
Miami, FL 33131  
Tel.: (305) 539-8400  
jlee@bsfllp.com  
rbaeza@bsfllp.com

Alison L. Anderson, CA Bar No. 275334  
725 S Figueroa St., 31st Floor  
Los Angeles, CA 90017  
Tel.: (213) 995-5720  
alanderson@bsfllp.com

**SUSMAN GODFREY L.L.P.**

Bill Carmody (admitted *pro hac vice*)  
Shawn J. Rabin (admitted *pro hac vice*)  
Steven M. Shepard (admitted *pro hac vice*)  
Alexander Frawley (admitted *pro hac vice*)  
1301 Avenue of the Americas, 32nd Floor  
New York, NY 10019  
Tel.: (212) 336-8330  
bcarmody@susmangodfrey.com  
srabin@susmangodfrey.com  
sshepard@susmangodfrey.com  
afrawley@susmangodfrey.com

Amanda K. Bonn, CA Bar No. 270891  
1900 Avenue of the Stars, Suite 1400  
Los Angeles, CA 90067  
Tel.: (310) 789-3100  
abonn@susmangodfrey.com

**MORGAN & MORGAN**

John A. Yanchunis (admitted *pro hac vice*)  
Ryan J. McGee (admitted *pro hac vice*)  
201 N. Franklin Street, 7th Floor  
Tampa, FL 33602  
Tel.: (813) 223-5505  
jyanchunis@forthepeople.com  
rmcgee@forthepeople.com

Michael F. Ram, CA Bar No. 104805  
711 Van Ness Ave, Suite 500  
San Francisco, CA 94102  
Tel: (415) 358-6913  
mram@forthepeople.com

**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA**

CHASOM BROWN, WILLIAM BYATT,  
JEREMY DAVIS, CHRISTOPHER  
CASTILLO, and MONIQUE TRUJILLO  
individually and on behalf of all similarly  
situated,

Plaintiffs,

vs.

GOOGLE LLC,

Defendant.

Case No.: 4:20-cv-03664-YGR-SVK

**DECLARATION OF CHRISTOPHER  
THOMPSON IN SUPPORT OF  
PLAINTIFFS' SUPPLEMENTAL  
SANCTIONS MOTION**

Referral: The Honorable Susan van Keulen

**DECLARATION OF CHRISTOPHER THOMPSON**

I, Christopher Thompson, declare as follows.

1. I have been retained by Plaintiffs' counsel to provide technical analysis and testimony concerning Google's Incognito-detection bits. In addition, I have been retained to provide additional information regarding the productions made by Google during the Special Master process, their timing, and the negative implications of the inconsistent production and search criteria to our analytical efforts.

2. All of the statements in this declaration are true based on my analysis and personal knowledge, and I am available and if the Court permits to provide testimony on these matters.

3. A copy of my CV was previously filed with this Court. Dkt. 536-9. As reflected in my CV, I majored in Computer Engineering and have many years of experience in computing technology. I am being compensated at a rate of \$275 per hour for my work in connection with this matter, and none of my compensation is contingent on the outcome of this litigation.

4. In the course of my previous work writing software and building software systems, I designed and used systems that leverage rolling log files. In these systems, logs may be regularly deleted or rotated, depending on the intended use case. For example, log files may be stored in a format more easily accessed for a limited period of time, and then moved to a format that incurs less cost but is harder to access. I also have personal experience working with systems that utilize date information to separate large data sets for efficient query execution.

5. I have reviewed each and every submission Google and the Special Master made available as part of the Special Master process, including Plaintiffs' data and test data produced by Google, and the transcripts of the hearings before the Special Master. I also attended several hearings and meet and confers before the Special Master. In addition, all documents Google produced and deposition transcripts for witnesses in this case have been made available to me, pursuant to the Protective Order issued in this case.

6. I was also present at a live test demo with Google engineers and Special Master Douglas Brush on March 4, 2022. At that session, we had tested a small set of Biscotti IDs against three of the “maybe\_chrome\_incognito” logs.

7. I also testified during the Court’s April 21, 2022 sanctions hearing.

8. The Court’s November 12, 2021 order outlined detailed requirements for the Special Master process, including timing requirements for four iterative searches. Due to Google’s repeated failure to comply as I outline below, the process took over six months for just three iterative searches.

**Google’s Failure to Provide a Complete List of Data Sources and Log Schemas**

9. The Court’s November 12, 2021 order required Google to provide a declaration that “Google has provided a complete list of data sources that contain information relevant to Plaintiffs’ claims.” However, Google’s identified list of data sources omitted the vast majority of data sources that contain Incognito detection information.<sup>1</sup> The Court’s order also required Google to provide “full schemas” for selected data sources; however, Google’s production of “top 100” fields omitted important Incognito-detection bits and information regarding which log sources contain x-client-data header.

10. Google’s obfuscation of data sources and schemas prevented Plaintiffs from selecting the relevant logs containing Incognito-detection bits and unnecessarily prolonged all three iterative searches. Each time a new set of relevant log sources or Incognito-detection field was uncovered, Plaintiffs’ counsel and technical experts had to seek additional production of log schema and relevant data. Still, to date, Google has failed to produce the full schema for all of the identified logs containing Incognito-detection bits and only produced partial schema for a small portion of the logs after much delay.

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<sup>1</sup> See Dkt. 593-3 at 9–22. After the technical rebuttal report was submitted, Google then belatedly identified additional log sources containing Incognito detection bits, from which the Plaintiffs received neither full schema nor any opportunity to search for responsive data. See Dkt. 614-2. In addition, Google still has not attested that there are no other log sources containing Incognito detection bits. See Dkt. 614-2.

1 **Google's Delay in Producing Responsive Data**

2 11. The Court's November 12, 2021 order required Google to produce "full records of  
3 each responsive and relevant search term hit as well as the criteria used" within three days of  
4 receiving search terms from the Plaintiffs. Google failed to comply. Rather, Google took additional  
5 time to produce results on a rolling basis, and in an order unilaterally determined by Google.  
6 Google delayed the productions in at least four ways: 1) not properly formatting search queries; 2)  
7 refusing to produce data outside of an eight-day window; 3) failing to provide timely publisher  
8 notice; and 4) refusing to comply with Court-ordered searches. I will discuss each of these in turn.

9 12. First, Google repeatedly failed to produce responsive data by not properly  
10 formatting search queries. For example, during the First Iterative Search, Google did not disclose  
11 that Analytics CID and UID searches required a corresponding web property ID. Even when web  
12 property IDs were submitted with subsequent searches, Google failed to limit the results to only  
13 those web property IDs. As another example, during the Second Iterative Search, Google did not  
14 properly format submitted user agent strings to match annotations appended by Google's internal  
15 services and, consequently, the form that was stored in Google logs. As a result of Google's  
16 failures, Plaintiffs' experts had to spend extra time to analyze the data and diagnose issues when  
17 the returned data was NULL or obviously non-sensical.

18 13. Second, Google repeatedly refused to produce data outside of an eight-day window.  
19 While Google was able to produce approximately one month of [REDACTED] ads log data in December  
20 2021 during the First Iterative Search, Google unilaterally decided that for all other [REDACTED] log  
21 data (including UMA data) and for subsequent searches, it would only produce data within an  
22 eight-day window using the Dremel tool. Both the eight-day window and the December time frame  
23 were decided by Google without input from Plaintiffs' counsel and/or experts. For the first two  
24 iterative searches, Google's rolling eight-day production often led to produced data that did not  
25 overlap in time. Despite Plaintiffs' objections to Google's unilateral decisions, Google never  
26 produced more, and this prevented Plaintiffs' experts from fully studying the full breadth of

1 joinability issues across different types of logs and resulted in additional time and effort in  
2 formulating subsequent searches to address Google's obstruction.

3 14. When executing these rolling, eight-day searches, Google prioritized identifiers and  
4 log sources it unilaterally deemed "more relevant" (again, over Plaintiffs' objections), further  
5 confounding Plaintiffs' experts' efforts to conduct a full joinability analysis. This wasted valuable  
6 time and resources to analyze what was produced, and then regenerate search terms and criteria.  
7 The revelation that Google would only be producing a subset of the ordered data and that certain  
8 log sources had not yet been searched was only made at the 11th hour of the corresponding  
9 deadline, without consultation of Plaintiffs' counsel and/or experts.

10 15. Third, Google repeatedly raised the issue of publisher notification with respect to  
11 certain log sources, particularly those that clearly join third-party IDs. Google indicated that it  
12 would need to provide "contractually agreed upon" notice along with a reasonable notice window  
13 prior to data production. In the First Iterative Search, Google waited a month to produce data  
14 requiring publisher notification. In the Second Iterative Search, Google did not produce data  
15 requiring publisher notification. As the Special Master process continued, additional searches  
16 included data that supposedly required publisher notification and Google again raised this issue. It  
17 wasn't until a meet and confer on May 13, 2022, which I attended, that Google confirmed it had  
18 not started the publisher notice process for the Third Iterative Search. After the Special Master  
19 informed Google that he would enforce the May 20, 2022 production date with daily sanctions,  
20 Google then produced data requiring publisher notification on May 20, 2022, which confirmed  
21 that Google could satisfy publisher notice in days, not weeks or months.

22 16. Fourth, Google repeatedly refused to comply with the Court's order to search by IP  
23 address and another identifier. During the Second Iterative Search, Google did not raise any  
24 objections to search with IPv4 address and user agent string combinations; however, Google did  
25 not properly format the user agent strings as discussed earlier, resulting in NULL sets. Once it  
26 became clear that proper formatting of the search queries would return responsive data, Google  
27 then refused to search IPv4 + user agent for the Third Iterative Search. In addition, Google imposed  
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1 further attestation and technical requirements on IPv6 + user agent search in May 2022, further  
 2 delaying the search process.

3 **Google's Continuing Failure to Identify all Incognito-Detection Bits and the Logs in which**  
 4 **They Have Been Implemented**

5 17. Google states that it has identified [REDACTED] additional relevant logs via Mr. Sramek's  
 6 declaration, used to [REDACTED]

7 [REDACTED]

8 [REDACTED].

9 18. Google's own description of these logs confirm, at minimum, that Google [REDACTED]  
 10 [REDACTED]. In addition,

11 Google's description of these logs confirm that [REDACTED]

12 [REDACTED]. Mr.

13 Sramek's description of these logs refute Google's claim that it does not join private browsing data  
 14 with authenticated data. *See, e.g.*, Sramek Declaration ¶ 9.

15 19. All of these logs were and would have been relevant in connection with the Special  
 16 Master process, and I would have advised and requested testing against these logs, in addition to  
 17 their full schema, had Google properly identified them during discovery.

18 20. With the additional maybe\_chrome\_incognito logs identified by Mr. Sramek,  
 19 Google has identified [REDACTED] logs with that bit. However, for the is\_chrome\_incognito and  
 20 is\_non\_chrome\_incognito bits, Google only identified [REDACTED] logs, as the "[REDACTED] logs." Given that  
 21 Mr. Sramek does not state that Google has identified all of the Incognito-detection bits and the  
 22 logs in which they have been implemented, it is highly likely that there are other logs containing  
 23 the is\_chrome\_incognito and is\_non\_chrome\_incognito bits, as these bits are in the  
 24 [REDACTED] fields, a very commonly used proto schema for all Google "upstream logs"  
 25 (i.e., Google logs that log data at the beginning of the data logging process). Likewise, the  
 26 maybe\_chrome\_incognito bit is contained within the [REDACTED] proto, which is a  
 27 different proto commonly used in ads-related "downstream" logs. Notably, Mr. Sramek did not  
 28 state that Google has identified all logs containing the maybe\_chrome\_incognito field.

1 I declare under penalty of perjury under the laws of the United States of America that the  
2 foregoing is true and correct. Executed this 4th day of August, 2022, at Nolensville, Tennessee.

3 /s/ Christopher Thompson  
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